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ABSTRACT

The purpose of this study was to describe the level of language maturity and the effect of a preschool language program on the language development of urban, Southern 4-year-olds. The 147 subjects (57 lower status blacks, 40 lower status whites, and 50 upper status whites) all participated in five-day per week prekindergarten programs. Dependent variables were measured by use of the Day Language Screen and the Brown, Fraser, Bellugi Test of Grammatical Contrasts. The Day Language Screen measures proficiency in certain receptive and expressive aspects of standard American English, while the Test of Grammatical Contrasts assesses ability to imitate, comprehend, and produce selected grammatical structures. Analysis of the Language Screen data revealed that, while no significant sex or sex-status-race interaction effects occurred, there were significant status-race effects on pretest, posttest, and gain scores. Upper class subjects had higher pre- and posttest scores, but lower class subjects of both races had larger gain scores. The upper class group scored significantly higher on all three tasks of the Test of Grammatical Contrasts, while, between the two lower class groups, the whites scored higher on the comprehension task, blacks on the imitation, and there was no significant difference on the production. (MH)

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Development of Grammatical Structures in Pre-School Age Children

The inter-relationship between the language development of children and success in school has been well documented. In addition, the wide variations in level of language maturity when children enter school are familiar to most educators. Little is known, however, of the differences in acquisition of grammatical structures in higher and lower status children.

The purpose of this study was to describe the level of language maturity and the effect of pre-school education on the language growth of Southern urban four-year old boys and girls. The sample included higher status white, lower status white, and lower status black children. Two measures were obtained: the children-s proficiency in certain receptive and expressive aspects of standard American English as assessed by the Day Language Screen; and their ability to imitate, comprehend, and produce selected grammatical structures as assessed by the Brown, Fraser, Bellugi Test of Grammatical Contrasts.

The 147 subjects were all enrolled in five-day per week pre-kindergarten programs. They represented higher and lower status groups, as defined by a modification of Warner's scale for ordering occupations of heads of households. The children were divided into three status-race groups: 57 lower status black, 40 lower status white, and 50 higher status white. The sample consisted of 83 boys and 64 girls with a mean chronological age of 51.8 months.

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The Day Language Screen is an individually administered instrument designed to assess both receptive and expressive facility with complete sentences, identity statements, singular/plural and negative forms, prepositions, polar opposites, and classofications. It contains 46 items, scored correct/incorrect. Each item makes use of small toys, colored cards, wooden shapes, or pictures of objects which the subject is asked either to identify, select, describe, or manipulate. Approximately 15 minutes are required to administer the screen.

Using another group of 19 children, comparable to the sample in the present study, a test-retest reliability correlation coefficient of .81 was obtained for the Language Screen. With this same group of children, a correlation coefficient of .46 was obtained between the Language Screen and the Peabody Picture Vocabulary Test.

The Language Screen was given to all three groups of subjects as a pre-test during the fall of 1968 and as a post-test during the spring of 1969. In the intervening five-month period observations were made of the language program in each classroom.

The results of the Language Screen were analyzed by three two-way analyses of variance assessing the effects of sex and status-race upon the pre-test, post-test, and gain scores. The results of these analyses are given in Table of the handout. No significant effects were found due to sex or to the interaction of sex with status-race. Significant effects due to status-race, however, were found for all three scores. Planned comparisons were made among the means and these comparisons are given in Table 2. The higher status white group obtained significantly higher pre- and post-test scores than either of the two lower status groups. However, both the lower status white and the lower status black gtoups obtained significantly larger gain scores than did the higher status white group.

Gordon (1968) and John (1965) have reviewed many studies assessing the influence of socio-economic status on language. They have concluded that children from lower socio-economic level backgrounds tend to be less fluent and less proficient in their language development than their peers from higher socio-economic level backgrounds. The Language Screen scores for the present sample support this conclusion. The higher status white children gave evidence of significantly greater proficiency in the aspects of standard American English which were assessed by the screen.

However, an important finding was the fact that both of the lower status groups gained significantly more on the Language Screen that did the higher status group. A language development program was used in the pre-kindergarten classes attended by these children. It was designed to improve their proficiency in several aspects of standard American English, including mastery of plural subjects and verbs, comparative adjectives, past tense of verbs, opposites, negative forms, and prepositions. The significant gains which these children made may be attributed, in part, to this formal language program. The higher status white group's smaller gain over the year is probably a result of their continued language development rather than any direct language instruction in their schools. In fact, the language program in their classes was much more informal and less direct than that in the lower status children's classes.

The Brown, Fraser, Bellugi Test of Grammatical Contrasts was also administered to all subjects during the winter of 1969. This test measures the ability to imitate, comprehend, and produce selected grammatical structures. It has two equivalent forms each of which contains two pairs of sentences for each of the 12 grammatical contrasts. The contrasts assessed include number, tense, voice, negation, mass nouns, indirect objects, prepositions,

and adjectives in two positions. Each sentence is illustrated by a picture. For the comprehension task, the subject points to the picture which illustrates the sentence just read. For the imitation task, no picutres are shown, but the subject repeats the sentence which the examiner has just read. For the production task, the examiner "names" the two pictures and then asks the subject to "name" first one and then the other. Form A was used for the imitation task for all subjects. One-half of the subjects were given Form A for the comprehension task and Form B for the production task. The forms were reversed for the other half of the subjects. The three tasks were presented in each of the six possible orders, one to every sixth subject. the 48 items on each task were scored correct/incorrect using a modification of the scoring procedure given by Fraser, Bellugi and Brown (1963). They give no reliability or validity data, but they do indicate 99% agreement among scorers. This test was also given to the subjects individually, taking approximately 15 minutes to administer.

A series of one-way analyses of variance were performed to determine the effects of status-race upon the children's performance on the three tasks of this test: imitation, comprehension, and production. The results of these analyses are given in Table 3 of the handout. Significant main effects due to status-race were obtained for all three tasks. Tests of planned comparisons were then made in order to locate the source of these significant effects. These comparisons are given in Table 4. The higher status white group performed significantly better than both of the lower status groups on all three tasks. The lower status white group performed significantly better than the lower status black group on comprehension. In contrast, the lower status black group scored significantly higher than the lower status white group on imitation. There was no significant difference between the scores of the two lower status groups on production. t-tests were computed

between the mean scores on the three tasks for the total group and for the three status-race groups. The results of these tests are given in Table 5. In each case the children scored significantly better on both the imitation and comprehension tasks than they did on the production task. There was no significant difference between the imitation and comprehension tasks in the higher status white and the lower status black groups; however, the lower status white group performed significantly better on the comprehension task than on the imitation task.

Fraser, Bellugi, and Brown used this same instrument with a group of 12 Northeastern higher status white children. Their subjects had a mean chronological age of 40 months. These subjects scored highest on the imitation task of the Test of Grammatical Contrasts. Their next highest score was on the comprehension task and their lowest score on the production task, with significant differences among the scores on all three tasks. In the present study, there was no difference between the subjects' scores on the imitation and comprehension tasks. However, their scores on both imitation and comprehension were significantly greater than their scores on the production task. These differences between the two samples may be due to differences in their socio-economic status, in their chronological age or both.

The subjects in the present study were able to score much higher than those in the Fraser, Bellugi, Brown study. This increased level of proficiency on all three tasks was, no doubt, due to the fact that the present subjects were nearly a year older than those in the Fraser group.

On all three tasks the higher status white group performed significantly better than the two lower status groups. These results also substantiate the findings that lower status children are less proficient in producing standard American English syntactic structures than are higher status children.

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For the total group, the higher status white children, and the lower status black children there was no significant difference between the comprehension and imitation tasks. Cherry-Peisach (1965) has suggested that black children may have difficulty understanding the speech of white, middle-class teachers. The present study appears to suggest that the lower status black children's understanding of the syntactic structures about equaled their imitation of them. For the lower status white group, however, their scores on the comprehension task were significantly greater than their scores on the imitation task. In other words, the lower status white children were able to understand structures which they could not imitate. In addition these children scored significantly higher on the comprehension task than did the lower status black children, whilte the reverse was true on the imitation task.

The common assumption that differences do exist in the language skills of lower and higher status children is supported by this study. In the formal testing situation, the lower status children were less proficient in using various language skills and less able to imitate, comprehend, and produce certain grammatical structures. The program designed to teach certain language skills to the lower status children was successful in producing large gains as measured by the instrument used in this study. In fact, the lower status children gained significantly more than the higher status children.

The findings of this study appear to have implications for classroom instruction in language and reading. The four year old lower status child can profit from direct instruction in language and reading. The four year old lower status child can profit from direct instruction in language skills. These activities should be a part of any pre-school program as a means of helping the children acquire the skills necessary for success in learning to read in the average classroom. Consideration should be given to implementing this program at an even earlier age level and continuing it through the primary grades.